# Intelligent Visualization (IVIS) User's Guide

with SB-5500 Series Controls

LL-5700 Rev 1.5a



Productivity through Precision™



IVIS IVIS							
Process							
Language	>	IVIS	IVIS - Intellige	ent Visualizatio	on		
Connection	>	U	Build: 422				
Access Rights	>	By using IVI IVIS is the vi	S software you accept the isualisation for products of	e terms of conditions of	the <u>license agreement</u>		
IVIS Mini View	>	SBS Dynam	ic Balance Systems				
Info	>	Accreted 2451 NW Portland	ch SBS Inc. / 28th Avenue OR 97210 USA				
Version	>	Any problem	is with IVIS? We will help	you! <u>(manuals can be f</u>	ound here)		
FW Update	>	Please send Logfile (de	l us a detailed description <u>ebug.html)</u>	with attached Logfile:			
Save/Recall	>	Current debu	ug level: 0xFFFF medium high				
			~ ~ ~		16 C	 6	 
^		~				Close IVIS	00





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# **User's Guide and Specifications**

for the

# Intelligent Visualization Information System (IVIS)

For Use with Model SB-5500 Series Control Units

LL-5700

Revision 1.5a For use with IVIS version 4.00 or later

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# **Benefits of IVIS**

- Increases throughput by saving setup time.
- All-digital electronic design increases operating life and reliability.
- Easy to install and operate.
- Works with existing SBS installations.
- International adaptability and display language.
- Backed by world-class SBS customer service.

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# **Introduction**

The Intelligent Visualization Information System (IVIS) is a display and user-interface program for the various functions of the SBS SB-500 control (process control and balancing). Use this convenient and flexible PC software program to operate these products. IVIS provides:

- User-friendly operation of the system.
- Simple and clear parameter settings.
- Clear display of process data, including saved data for process control products.
- A uniform user interface for all devices.

IVIS provides the user interface for all installed SB5500 functions, including ExactControl, AEMS, and balancing. The SB5500 hardware continues to function autonomously and independently of the IVIS operating software. IVIS supports multiple instances of IVIS on separate PCs configured to interface with any SB5500 control or a single instance of IVIS connected to several SB5500 controls.

## **Operator Safety Summary**

**Important!** Before using IVIS, read and understand the product safety information in all hardware product guides.

# **System Requirements**

- Windows XP SP3, Windows 7, Windows 10. (Windows Embedded Compact is not supported.)
- One free Ethernet interface: communication with the SB-5500 system is by Ethernet.
- Integration into Siemens machine control systems for the start of IVIS of Sinumerik Operate. For more information, see "Integration on Siemens Machine Control."
- A USB memory stick or other appropriate storage device with the current IVIS program.
- IVIS.exe requires read and write access to all files in the IVIS folder.

## Installation

- 1. Contact our sales department to ensure that your company email address is setup to use the Secure File Download website.
- 2. Go to the Accretech SBS, Inc. company website at https://accretechsbs.com/.
- 3. Under Support, follow the IVIS Software link, and click the <u>Secure File Download</u> link.
- 4. Unzip the software from the download file.
- 5. Copy the entire IVIS folder and all its contents to any folder on the PC or Windows-based CNC system.

**Note** IVIS does not need to be installed under Windows. Since it is not installed under Windows, it will not appear in the Windows program list.

- 6. Right-click the **IVIS.exe** file and create a desktop shortcut.
- 7. Double-click the **IVIS.exe** shortcut.

- 8. Connect an Ethernet cable from the SB5500 control to the PC to establish a link between the PC.
- 9. IVIS assists in the configuration process by searching for any connected devices. For more information about configuration, see the installation guide that comes with IVIS.

# **High-Resolution Displays**

When using a high-resolution display with Windows 8/10 and font scaling set >100%, you should adjust the Windows system scaling setting for IVIS for better display results:

- 1. With IVIS running, right click the IVIS logo in the Windows task bar
- 2. Right click IVIS.exe and choose "Properties".
- 3. Select the "Compatibility" tab
- 4. Choose the button "Change high DPI settings" and select the checkbox for "Override high-DPI scaling"
- 5. Set the selection for that setting to "System".
- 6. Quit and save settings using the "Ok" button.
- 7. Restart IVIS and the screen scaling will better match your display setting.

VIS.exe - Shortcut Pro	perties	>
Choose the high DPI se	ttings for this program.	
Program DPI		
Use this setting to instead of the one Open Advanced scalin	fix scaling problems for this in Settings in <u>settings</u>	program
A program might look changes after you sig this scaling problem for set for your main disp	blurry if the DPI for your ma n in to Windows. Windows o or this program by using the lay when you open this prog	ain display can try to fix DPI that's gram.
Use the DPI that's set	t for my main <mark>d</mark> isplay when	
I signed in to Window	vs. 🗢	
Learn more		
High DPI scaling over	ide	
Override high DPI Scaling performed	scalin <mark>g</mark> behavior. by:	
System	~	

# Start IVIS

Note

This guide uses English language setup screens. Your setup screens may vary in layout and language.

# End User License Agreement IVIS This End User License Agreement (the "Agreement") is a binding legal agreement between you and the co-licensors, <u>Schmitt Industries</u>, inc., and <u>Dr. Zinngrebe GmbH</u> ("Schmitt-Zinngrebe"). By installing and using IVIS (the "Software"), you agree to be bound by the terms of this Agreement. If you do not agree to the Agreement, do not install or use the Software. Schmitt-Zinngrebe provides hardware, including a control unit (the 'Product') and this Software. Schmitt-Zinngrebe has a valuable proprietary interest in the Software and licenses the use of the Software to you pursuant to the following terms and conditions. You assume responsibility for the selection of the Product suited to achieve your intended results, and for the installation, use and results obtained. License Terms and Conditions License lerms and Conditions 1. You are granted a non-exclusive, perpetual license to use the Software solely and in conjunction with the Product. You agree that tile to the Software remains with Schritt-Zinngrebe at all times. 2. You and your employees and agents agree to protect the confidentiality of the Software. You may not distribute, disclose or otherwise marke the Software available to any third party, except for a transferee who agrees to be bound by these terms and conditions. In the event of termination or expiration of this license for any reason whatsever, the obligation of confidentiality shall survive. 3. You may not disassemble, decode, translate, copy, repoduce or modify the Software, except on ly that a copy may be made for archival or back-up purposes as necessary for use with the Product. 4. You agree to maintain all proprietary notices and marks on the Software. 5. You may transfer this license if also transfering the Product, provided the transfere agrees to comply with all terms and conditions of this license. Upon such transfer, your license will terminate and you agree to destroy all copies of the Software in your possesion. The software is offered on an "as-is" basis and no warranty, either express or implied, is given Schmitt.Zinngrebe expressly disclaims all warranties of any kind, whether express or implied, Agree (F1) Disagree (ESC)

#### Figure 1



Figure 2

# First-Run Start

#### License Agreement, PCT Files and Language

1. On initial start, press F1 on the End User License Agreement window to agree with the terms of the license agreement.

Note To consult the license agreement at any time, click **Rotate b** to switch to General Settings, the Info tab, and then the license agreement link.

2. Press F1 on the PCT File Association window to associate PCT files with IVIS. PCT files contain information about stored processes. Associating the files allows the viewing of the content of these files in Windows.

Balancing		Process	
Language	>		
Connection	>	English	
o o nilo o nilo o nilo nilo o nilo	1	Deutsch	
Save/Recall	>	Italiano	
Access Rights	>	Français	
IVIS Mini View	>	Dansk	
Info		Svenska	
IIIO	/	Magyar	
Version	>	简体中文	
Version History	>	Slovenčina	
0			
Balancing: Slot	<ol> <li>Vibration sensor o</li> </ol>	pen (B)	
<u>^</u> `	✓ =>:		Close IVIS

Figure 3



Figure 4

- 3. If a Windows security message appears asking whether to install this program from an unknown publisher, click Yes. Or with an alternate warning message click More info and then Run anyway.
- 4. To select a language other than the default English, click Rest or use the cursor to select another Language option.
- NoteTo change the language at any time,<br/>click Rotate <br/>click at to switch to General<br/>Settings and then the Language tab.

## **Connection to the Device**

IVIS searches the network for devices automatically.

- 1. If IVIS does not find a device, do the following:
  - a. Verify that the DHCP or static setting is correct.
  - b. Check the wiring.
  - c. Ensure that a security system is not blocking the IVIS program.
  - d. Click **Search** to restart the device search.
- 2. On the Connection window in General Settings, IVIS displays all devices found in a device list.
- 3. Select the Profibus device option.

Notes	•	To select and connect a device, the device IP address must be compatible with the PC IP
		address.
	•	In addition to found devices, IVIS lists two items last on the device list. Offline mode is
		for an IVIS only connection that is used for viewing saved PCT files on the local
		computer. For more information about Manual configuration, see "Manual
		Configuration."

- 4. Click **Connect** to connect IVIS to the selected device.
- 5. (Optional) Connect up to four IVIS program instances to a single device.





#### Figure 6

Profibus settings (displayed in red) can be altered as needed. Refer to the Profibus/Profinet manual for details about the settings.

5. Otherwise, select Static IP.

6. Verify that the IP address for the selected device is compatible with the local adapter (PC) address and available for connection.

**Note** If the device is incompatible with the PC address and unavailable for connection, the device address appears in red and the device option appears shaded.

#### **Change IP Address**

- 1. To resolve an IP address compatibility issue, do the following:
  - a. Select the device.
  - b. Click **Change IP** to open the window for communication settings.
- 2. Refer to the Adapter IP and Subnet Mask next to the IVIS icon as a configuration aid.
- 3. (Optional) Change the assigned device **Name** and the **Profibus** ID.
- 4. If a DHCP server is in use on the network, select **DHCP**. Toggle the selection using the **Fixed IP/DHCP** button.
- 6. Type the **IP Address**, **Subnet Mask**, and **Standard Gateway** settings that are compatible with the PC adapter.
- 7. Click Change IP to save settings. The network searches for devices again.

**Note** Changes to the settings may take some time to complete, depending on the device type and the complexity of the network.

- 8. If the new settings for the device do not appear after 15 seconds, click Search.
- 9. Once the device settings are compatible, repeat steps 3 and 4.



### Manual Configuration

Use the **Manual configuration** option at the end of the device list in cases where IVIS is connected by a router.

- 1. Select **SB5500** as the type of device.
- 2. In **IP**, type a compatible fixed IP address.
- 3. In **Serial Number**, type the serial number of the SB5500.
- 4. Verify that there is a VPN connection to ensure connection across routers, or take steps to ensure that ports and IP address assignments are compatible.

Figure 7

5. Restart IVIS. The system automatically saves and sets all parameters changes for use when the program is restarted.

NB IVIS			
Balancing	Process		
Prozess: Karte 3: Sensorfehl	er		
Start Start Teach	Chaopel File	Next Instance	
Job 1 Job 1	Pile		Balancing
Figure 8			

# Start After First Run

When starting IVIS after the first run, the **Balancing** or **Process** tab, or both, appear for the installed products.

## **Connection Indicator**

The connection indicator circle at the bottom left of the window above the menu bar indicates whether the IVIS program has connected successfully with SB-5500.

- A green circle indicates a successful connection.
- A yellow circle indicates that IVIS is attempting a connection.
- A red circle indicates a failed connection attempt.

When SB-5500 is restarted, it takes about 10 seconds for the control unit to reboot and re-establish connection to IVIS.

IVIS is persistent. That is, it saves connection information, the last screen position, and window size automatically. It restores theses settings when the program is restarted.

Whenever a process card is installed in SB-5500, the default IVIS view is the most recently selected **Process** view. If that view is the **Job**, **Instance**, or **Channel** view of the ExactControl card, then the display is empty of data until a process is setup or started.



Figure 9

# Integration on Siemens Machine Control

When integrated with machine controls, use the following command line options to start IVIS without a window frame and header.

#### IVIS.exe -noFrame

Use the following command to start IVIS without a window frame and header, as with - **noFrame**, and to start IVIS in full-screen mode. On small screens, this uses the space optimally.

**IVIS.exe** -fullscreen

#### Sinumerik 840Dsl with Sinumerik Operate

For information about Sinumerik 840Dsl with Sinumerik Operate, see the IVIS user's guide provided with IVIS software, which is in the **IVIS** manuals directory.

#### FANUC, Bosch Rexroth, and Heidenhain CNC

When using the PC-based version of the control with Windows, IVIS can run on FANUC, Bosch Rexroth, and Heidenhain CNC controls. The software framework of these CNC controls provides a mechanism, such as **...start an external application...**. In this case, we recommend using the command line **-fullscreen** option.

#### **IVIS Command Line Interface**

To control the position and appearance of the IVIS program, use the following command line interface:

d:\\IVIS\\Ivis.exe -<command>

Options for <command>:

-help

displays an English language Help window with a summary of the commands

```
-pos <x> <y>
```

sets the location of the upper left corner of the IVIS window

```
-size <width> <height>
```

sets the width and height of the IVIS window

```
-noframe
```

starts IVIS without a window border

-fullScreen

starts IVIS maximized without a window border

#### -closeMiniViewOnly

terminates a running Mini View application

The coordinate value parameters are measured in display pixels. The origin is the upper left corner. If there is more than one display, it will depend on the settings in Windows (the primary screen has 0,0 at the left upper corner).

# **IVIS Overview**

IVIS			-		×
Balancing		Process			
Language	>		_		
Connection	>	English			
A	,	Deutsch			
Access Rights	/	Italiano	1		
IVIS Mini View	>	Français			
Info	>	Dansk			
Version	>	Svenska			
FW Update	>	Nederlands			
Save/Recall	>	Magyar			
•					
^	′ ⊏>:		Close IVIS	0	0
Figure 10					

When IVIS connects to a device, the display automatically adjusts to the hardware configuration. The operating areas are divided into tabs. The **Balancing** tab shows balancing functions. The **Process** tab shows process monitoring functions (ExactControl and AEMS).

For each view (**Balancing** or **Process**), use the associated parameters tab to find and set the related parameters:

- Balancing Parameters
- Process Parameters
- General Settings

# **IVIS Operation**

Operate IVIS primarily with the eight buttons in the menu bar. These buttons have different functions based on the operational context. They provide the operator with the functional choices for product operation, based on the operation. Operate the buttons with the keys on the machine control panel, by using the PC keyboard (F1-F8), or by using the cursor.

#### **Process and Balancing**

When both types of products are installed in SB-5500, use **Process** and **Balancing** to switch between the **Process** view and the **Balance** view.

#### Rotate

Use **Rotate** 🔐 to switch between the following tabs:

- Balancing View
- Balancing Parameters
- Process View
- Process Parameters
- General Settings

#### **Editing Parameters**

To select which item to view, click Up 🔨 and Down 🗸 or press the Up and Down arrows on the PC.

To move through the options in a list, click **Next** ⇒ or use the cursor to select an option.

To select the parameter options menu for the selected parameter, click **Forward**. When **Forward** appears next to a parameter, it indicates that an options menu exists for the parameter.

To enter parameter settings, use the PC keyboard or click **Keyboard** is for a virtual keyboard, which is accessible for all parameters that require input. To save changes and exit the virtual keyboard, click **Enter**. To select from an available list of parameters, click **Left** and **Right**.

The system saves all changes to parameters immediately, except when editing ExactControl process control job parameters. When changing these parameters, the word *Modified* appears in red in the top right corner of the parameters window and **Undo** and **Undo** is available on the menu bar. Click **Undo** to revert changed settings on the window to the last saved state and to undo any erroneous changes. This functionality depends on the context. When in a submenu (for example, a Strategy submenu), **Undo** only affects the submenu items. When editing a job, click **Undo** to revert the entire job.



# **IVIS General Settings**

## Language

At the first run, the English language is set by default. For another option, go to **General Settings**, select **Language**, and then select an option.

Figure 11

M IVIS							- 🗆 🗙
Balancing	B	Proce	ss				
Language	>	Ad	apter IP: 10.0.0.112				
Connection	>	Na	me: 5562 Dan ofibus: 3				
Access Rights	>	Ad Se	10.0.0.183 apter IP: 10.0.0.112 rial Number: 2564				
IVIS Mini View	>	Na Pro	me: 5500 Dan 2 ofibus: 3 10.0.0.182				
Info	>	Se	apter IP: 10.0.0.112 rial Number: 503				
Version	>	Of Sh	fline mode ow and analyze PCT files offine				
FW Update	>	Ma	inual configuration				
Save/Recall	>	SB Se	5500 rial Number: 0				
•			· ·				
^	~	₽	Connect	Search	Change IP	Close IVIS	00

Figure 12

## Connection

IVIS automatically scans the network for devices and displays all found devices.

The red checkmark indicates which device is connected.

For more information about setting the connection, see "First-Run Start."

IVIS									×
Balancing			Pro	ocess		B			Ĥ
Language	>	Sa	ve/Reca	11					
Connection	>	Plea	ase choose					1	
Access Rights	>		Create b	ackup		Restore	backup		
IVIS Mini View	>	Bac	s local	C://\	/15/11	/IS/b			
Info	>	Stat	tus						
Version	>								
FW Update	>								
Save/Recall	>								
	Sa	ve /	Choose			¢٦	Y		0
	Re	call	drive			Start			00

#### Save

- 1. To open the Save/Recall window, click the **General Settings** tab and then the **Save/Recall** tab.
- 2. To toggle between the save and recall functions, click **Save/Recall**.
- 3. To save user settings for each installed device card in the SB-5500 control to individual files, click **Create backup**.
- 4. To use a USB drive as the storage location, attach the USB drive, so that the system will list it as a backup target.

Figure 13

- 5. To select the storage location for the files, click **Choose drive** or toggle between the available drive locations. The default location is the IVIS program directory.
- 6. To transfer the settings files in supported cards in a connected SB-5500 series controller to IVIS, click **Start**.
- 7. When creating a backup, the system creates a **Backup** sub-directory automatically and uses it as the file location.

IVIS							×
Balancing		Pr	ocess				
Language	> Sa	ve/Reca	all				
Connection	> Ple	ase choose	•	225 - 25		ŕ	
Access Rights		Create I	backup	Restore	backup		
IVIS Mini View	> Ba	ckup source	C:/IVIS/IV	IS/b	n I		
Info	> C:/	IVIS/IVIS/b	ackup		2		
Version		Slot 1:		S 🕨 🛚	Manual (55	43)	
EW Update	> 1	Slot 2:	5562P2.SB	S S	Studer AE	Control	l (
	_ 1	Slot 3:	5522A3.SB	s /	AEMS (55	22)	
Save/Recall	> 1	Slot 4:	5512S4.SB	S M	<b>Aechanical</b>	(5512)	)
	1	Main:	5510M0.SB	S			
		×	× ×		Ŷ		
<b>^                                    </b>	Save / Recall	Choose drive	₽	्र Start			0

#### Recall

When creating a backup, the system saves the Main PCB settings. The Main settings are limited to connection settings (Ethernet and Profibus) and language selection. For this reason, we recommend excluding the Main file when using **Restore backup** to setup a new control unit, allowing for differences in connection settings.

**Restore backup** only transfers settings to device cards in the target SB-5500 that match both the card type and the slot number (1-4) of the saved configuration. When the system does not find a matching file at the target location, it skips the slot in the restore process.

Figure 14

- 1. To open the Save/Recall window, click the General Settings tab and then the Save/Recall tab.
- 2. To toggle between the save and recall functions, click Save/Recall.
- 3. To send (recall) saved settings to the same or another connected SB-5500, click **Restore backup**. The status area displays the message **Valid backup found**, **Press Start to recall settings**, if the default IVIS program directory contains settings files.

- 4. To select the storage location for the files, click **Choose drive** or toggle between the available drive locations.
- 5. To transfer the settings files from IVIS to a connected SB-5500 series controller to IVIS, click Start.

During the transfer of settings, a transfer status bar for each card appears along with the overall status of all transfers. If an installed card does not support the **Save/Recall** function or if a data transfer error occurs, the status area will indicate a failure in red for that card.

In addition to an .SBS file, when a .NET framework is installed on the PC, the system simultaneously converts the .SBS files to a human-readable text (.txt) file in the same folder as the .SBS file. A **Converted** message appears in the status area of the window for each created text file.

**Note** If the PC does not have .NET installed, the system cannot create a text file.

The system names the settings files using the card type and the slot number, which it formats as 55nnyx.SBS. The naming convention is as follows.

- **55**: SB-5500 series controller.
- **nn**: Indicates where the product number of the card appears.
- y: Indicates where a letter for sub-models of the card appears. D indicates dual plane, S indicates single plane, A indicates AEMS, P indicates process, M indicates main, and an underscore (\_) indicates that there is no extra information. The system reserves R for firmware update files.
- **x**: Indicates where the slot number from 1 to 4 appears. Main will always have 0 for the slot number.
- .SBS: Proprietary Dynamic Balance System file type.

When settings recall is complete, the controller waits a few seconds and then disconnects automatically from all current IVIS instances. The IVIS instances reconnect automatically and update with the new settings. As with any Ethernet connection, this reconnection may take a few minutes. While this process is pending, IVIS displays a window indicating that it needs to reconnect.

we IVIS							_3		×
Balancing			Process						B
Language	>	Acc	ess Rights						
Connection	>	Choo	Se access level, sel/cr	ent access lev	el: Man	ufacturer			
Access Rights	>	IVIS	Access Level Set access level, passwords		4	Manufacturer	)	•]	
IVIS Mini View	>	2	Password for Manufa	cturer	****	***			
Info	Ś	2	Password for Expert		****	***			
	(	Ð	Show inaccessible fields	elds	yes	Č.			
version	2								
FW Update	~								
Save/Recall	>								
		1227					ľ		
<u>^</u>						Close IV	IS	0	0

#### **Access Rights**

To control access to certain functions, such as making settings changes, IVIS includes an access rights system. It provides the following access levels:

- User: Access for the machine operator.
- **Expert**: Access for the process manager.
- **Manufacturer**: Full access to all functions for machine setup.
- Service: SBS service staff access only.

The **Current access level** appears in the status bar at the top of the menu list.

Figure 15

Parameters are either hidden or dimmed to show they are not accessible at the current access level (see below). The machine builder may customize each parameter to match IVIS capabilities to each access level of the machine.

#### Setting Access Level passwords

**Note** By default, the password for each of the user levels is empty when IVIS is installed, so IVIS permits full access. (User level does not require a password.)

To enable protected use of one of the Access Rights levels or to change an existing password, enter a password for that access level.

- 1. Select the General Settings tab.
- 2. Click Access Rights to open the Access Rights window.
- 3. In a **Password for**... field for the current access level or a lower access level, type a password.
- 4. Press Enter.

#### **Deleting Access Level passwords**

To reset a password to empty, delete the existing password.

- 1. Select the General Settings tab.
- 2. Click Access Rights to open the Access Rights window.
- 3. In a **Password for**... field for the current access level or a lower access level, delete the password.
- 4. Press Enter.

#### Selecting different access levels

Use Access Level to select another access level option.

- 1. Select the General Settings tab.
- 2. Click Access Rights to open the Access Rights window.
- 3. From Access Level, select an access level option.
- 4. If selecting a higher access level with a set password, type the password for that level.

**Note** When the system requires a password to change the access level, the **Lock** icon appears next to the **Password** field.

- 5. Press Enter.
- 6. Verify that the access level changed by checking the **Current access level** status bar.
- 7. After using or configuring a higher access level, follow steps 1 to 6 to reset the access level to its previous level. The next time the IVIS program is restarted, it will open with the last-selected access level.

#### Showing and hiding inaccessible fields

The **Show inaccessible fields** option is a global setting for all access levels. It allows control over the view of parameters that are not accessible for the active access level.

- 1. Select the General Settings tab.
- 2. Click Access Rights to open the Access Rights window.
- 3. From Show inaccessible fields, do one of the following (This may require a higher access level):
  - a. Select yes to show all parameters. The inaccessible parameters appear dimmed.
  - b. Select **no** to remove the inaccessible parameters from display.

balanoing						
Language	>	IVIS	Mini View configuration	a cm	all process view at a	fixed
Connection	>	positi this w	on on the screen. This can also be co indow will be displayed or hidden aut	uplec	I with the machine s cally.	creen, th
Access Rights	>		Mini View confi	gurati	on	
IVIS Mini View		0 <sup>C</sup>	Operating mode Select operating mode	•	automatic	
TVIO IIIIII VICIV	-		Position Select this to set the position	x=42	26 y=124 (273x190)	>>
Info	>	1	View Select view (ExactControl only)	Insta	ance view	
Version	>	5	Enable smart display of MiniView	no		
FW Update	>	IVIS	Start Mini View Start Mini View with IVIS	no		
Save/Recall	>	IVIS	Click to Close Choose whether closing from Mini View is possible	yes		
			· · · ·			

Figure 16

#### **IVIS Mini View**

IVIS Mini View is a separate program that can run on a PC to provide a small view of the essential status information from IVIS. It runs independently of IVIS and can be set to appear at a fixed position and size on the screen. To allow this view to appear or hide automatically, place IVIS Mini View on the machine screen. Some parameters are available to set up how and when IVIS Mini View appears.

After making changes to the IVIS Mini View parameters, click **Apply changes** to save them.

To start the program, click **Start IVIS Mini View**.

When IVIS Mini View is running, click **Stop IVIS Mini View** to stop it.

#### **Operating mode**

The Operating Mode window configures IVIS Mini View to run correctly on the machine screen of different CNC platforms. The **Automatic** setting detects the CNC type and is recommended for most installations. If this setting is not working, select the CNC device type from the list: **HMI Advanced**, **Sinumerik Operate**, or **Bosch Rexroth**.

(WB) IVIS						
Balancing		Process				
Language	> IV	IS Mini View configuration	o have a small process view on a fixed position			
Connection	> on dis	the screen. This can also be coupled wi played or hidden automatically.	th the machine screen. Then this window will be			
Save/Recall	<b>N</b>	Select window to be monitored and choose condition				
Gurenteeur	1	Start Button	I must exist ►			
Access Rights	> [	IVIS Qt5QWindowicon	must exist			
IVIS Mini View	>	AMD:CCC-AEMCapturingWindow WindowsForms10.Window.8.app.0.3598b65_r11_a	d1 must exist			
Info	>	Program Manager Progman	must exist			
Version	>					
Version History	>					
•						
<u>^</u> `	/	Back	Start IVIS Mini Close IVIS			

Use the **Window** setting to attach the IVIS Mini View display to the state of a specific window in the operating system. The options list the program windows that are running. The user can select a window and associate the Mini View display, when it is running, with this window.

The association options include:

**Must exist**: Mini View appears when the selected window is running.

**Isn't minimized**: Mini View appears when this window is running and not minimized.

**Has focus**: Mini View appears when this window is selected.



Use the **Process** setting to attach the IVIS Mini View display to a running process in Windows, so that Mini View is active when the selected process is running.

Balancing			Process		same any of free t	
Language	>	IVIS Mir	lini View config	juration	ve a small process view	on a fixed position
Connection	>	on the s displaye	creen. This can also l d or hidden automati	be coupled with th cally.	e machine screen. Then	this window will be
Savo/Pocall	N			Learn pos	sition	
Saventecali	1		earn position lect this to set the position		Learn position	>>
Access Rights	>	-0 X	-position position of upper left corner		1120	
IVIS Mini View	>	t Y	position position of upper left corner		513	
Info	>		/idth idth of mini view window		400	
Version	>		eight ight of mini view window		266	
Version History	>					
			•	•	*	
<u>^</u>	~	⇒	: »	Back	Stop IVIS Mini View Close IV	/is

Figure 18

x=426 y=12	24 (273x190)
Save	Cancel
Figure 19	

#### Position

Use the **Position** setting to set IVIS Mini View to appear at a fixed position and size on the Windows desktop. When Mini View appears, it is on top of other windows or programs.

Set the position and size of the Mini View window by using the manual settings or by using the **Learn position** option.

#### Learn position

To use the **Learn position** option, do the following:

- 1. Click the **Forward** arrow next to the **Learn position** option to show an outline of the window on the desktop.
- 1. Move or resize the outline.
- 2. Click Save.

#### View

When using ExactControl, use the **View** option to configure the content of IVIS Mini View, which can display either **Instance view** or **Channel view**. **Instance view** splits the Mini View display area to show all instances of the current job. **Channel view** has an option menu to show the configuration of the two channels.

#### Enable smart display of Mini View

To allow IVIS Mini View to appear only during a running process, select **Yes** next to the **Enable smart display of Mini View** option. Then Mini View appears only when Process Start is activated until three seconds after the Process Stop signal is activated.

#### **Start Mini View**

To start IVIS Mini View whenever IVIS starts, select Yes next to Start Mini View.

#### Mini View automatic start

IVIS Mini View can be configured to start automatically when a Siemens CNC control starts. The supplied configuration file at **IVIS\Siemens\Sinumerik Operate\cfg\systemconfiguration.ini** contains the following line. Implement this line on the CNC. Remove the comment from the line and edit the file location path as needed:

#### ;PROC601= image:="d:\\IVIS\\IvisMiniView.exe", process:=IVIS\_MINI, background:=true

#### Mini View command line interface

To control the position and function of the Mini View, use the following command line interface:

d:\\IVIS\\IvisMiniView.exe -<setting>

Options for <command>:

-help	displays an English language	Help window with a summary of the commands				
-pos <x> <y></y></x>	sets the location of the upper	left corner of the Mini View window				
-size <width> <height< th=""><th>&gt; sets the width and height of the</th><th>ne Mini View window</th></height<></width>	> sets the width and height of the	ne Mini View window				
-close	terminates a running Mini Vi	ew application				
-enableSmartDisplay	enables SmartDisplay (Mini V running)	enables SmartDisplay (Mini View window is only visible if a process is running)				
-disableSmartDisplay	diables SmartDisplay (Mini V	iew window is always visible)				
-show	shows the window for a runni SmartDisplay mode)	ing Mini View application (disables the				
-hide	hides the window for a runnir SmartDisplay mode)	ng Mini View application (disables the				
-resetOperatingMode	re-enables SmartDisplay mod	le (cancels show and hide)				
-view <type></type>	sets the desired view accordir	ng to type:				
-view 0	displays the instance view					
-view 10	displays the AEMS view					
-view 50	displays the balancing view					
-view 201 <up< th=""><th>perChannel&gt; <lowerchannel></lowerchannel></th><th>displays the channel view for two channels, upper and lower:</th></up<>	perChannel> <lowerchannel></lowerchannel>	displays the channel view for two channels, upper and lower:				
0	digital channel 1					
1	Profibus channel 1					
2	Profibus channel 2					
3	Profibus channel 3					
4	Profibus channel 4					
5	digital channel 2					
-						

- 6 manual channel
- 100 automatic channel selection

WB IVIS	- 🗆 X
Balancing	Process
Language	Version: 3.99 (06.2020)
Connection	> Build: 420
Access Rights	By using IVIS software you accept the terms of conditions of the license agreement IVIS is the visualisation for products of
IVIS Mini View	SBS Dynamic Balance Systems
Info	Accretech SBS Inc. 2451 NW 28th Avenue Portland OR 97210 USA
Version	Any problems with IVIS? We will help you! (manuals can be found here)
FW Update	Please send us a detailed description with attached Logfile:     Logfile (debug.html)
Save/Recall	Current debug level: 0xFFFF Iow medium high
Balancing: Slot 1:	Low Coolant Flow detected (M)
^	Ciose IVIS
-igure 20	

#### Info

The **Info** tab summarizes general information about IVIS:

- IVIS software version and date.
- Link to the license agreement.
- Link to the SBS Dynamic Balance Systems website.
- Manufacturer contact information for customer service.
- Link to the log file, which is stored in HTML format.
- Debug level options. By default, the debug level is set to **low**.

If experiencing issues with IVIS or product operation, do the following:

- 1. Change the debug level to **high** to capture maximum information regarding the system status.
- 2. Click the Logfile link to open the debug.html file in the installed browser program.
- 3. Provide the **debug.html** file to IVIS support to address technical support questions or issues.

Language	IVIS - Intelligent Visualization
No.	Version: 3.99 (06.2020)
Connection	Build: 420
Access Rights	IVIS Version History
IVIS Mini View	Adjustable access rights. See "accessRights" folder for details.
Info	Version 3.98 (04.2020)     Update and improvements for AE sensor learning
Version	Version 3.97 (03.2020) • Profilms device ontions added
FW Update	Firmware update: File search pattern changed in IVIS     Version 3.96 (01.2020)
Save/Recall	Balance in progress notification on AEMS and ExactControl     Realtime learn display for AEMS and ExactControl     User antiference during expression lab
Delegation Clat 2: Mit	

Figure 21

#### Version

The **Version** tab summarizes general information about the IVIS version:

- IVIS software version and date.
- Log of all changes to the IVIS software.

#### **Close Program**

To close IVIS, click **Close IVIS**, press **Alt+F4**, or click the **Close** icon at top right of the program window.



Figure 22

The **FW Update** tab can be used to update the controller's firmware.

Click the **Directory** button and <u>point to a folder</u> containing the unzipped SB files downloaded from <u>https://accretechsbs.com/</u>.

Click Start and wait for the updates to finish.

See the Maintenance and Support section if this screen is not active.

# **Balancing View**

The Balancer cards also have interfaces through the Profibus/Profinet interface if it is installed.



## **Balancing Overview**

Balancing View tab.

- Balancing Parameters tab.
- Balance Card Name: Five-digit assigned name of the balance card. The default names are SLOT1 through SLOT4. The user can define a name for the slot on the Parameters window, appears with the slot number followed by x.
- 2 Status Indicators: Status indication for error messages For more information, see "Status Line."
- Speed: Spindle speed, if available.
- Balance or Vibration Value: Displays the display units and the measurement type (amplitude, RMS, or peak-to-peak measurement). Select the value on the Balance Parameters window.
- Graphical Display of Unbalance
   Target Limit: Target balance level

**Tolerance Limit**: Maximum imbalance

**Oritical Limit**: Safety warning

#### **O** Background Color

Green: Balance is OK and is in the acceptance range.

**Yellow**: Unbalance is above the acceptable balance tolerance, so a rebalance operation is required. **Red**: Unbalance has exceeded the critical safety limit.

- Status Line: Displays the connection between IVIS and equipment as well as any status messages.
- **Menu Bar** with function buttons.



### **Balance Operations**

If more than one balance card is present, click a balance card button to select that option. The assigned name for each card appears in the menu bar (for example, BAL1 or BAL2).

To change the name of the balance card, select the **Balancing Parameters** tab.

Figure 24



Note All menu keys shown in the figure at left will not appear at the same time.

The available functions appear based on the type of balance card installed (automatic, two-plane, manual balance, etc.) as well as the current function.

For more information about functions, see the instruction guide supplied with SB-5500 control.

Figure 25

#### Auto Balancing

Click Auto Balancing to start the balancing process for all balance cards that support automatic balancers.

The Auto Balancing 🕶 icon appears during the balancing cycle, along with the status of the process.



Figure 26



Figure 27

#### Single Plane and Dual Plane

If dual-plane balance cards are installed in SB-5500 (pair -D type cards in slot 1-slot 2 or in slot 3-slot 4), then the one-plane operation and two-plane operation options are available. This mode affects the automatic balancing and pre-balancing cycles. When two dual plane balancing cards are installed in the control, they are displayed together in IVIS on the balancing parameters screen to provide a better overview of the job configuration of the two cards.

#### **Balance Jobs**

The ability to set and select balancing jobs was added in IVIS version 3.80. Select "**Enable Jobs**" on the Balance Parameters screen, and then select from available job sets (1-8). Using Balance Jobs allows different Balance parameters to be configured for different uses or operations.

#### **Pre-Balancing**

Use **Pre-Balancing** to compensate for any basic imbalance (for example, imbalance caused by a grinding wheel change).

This process allows for the manual placement of weights to balance the new wheel, so the automatic balancer achieves balance with less compensation.

There are five different balancing strategies available. (The figure at left shows the fixed location strategy.)

#### Trim Balancing

If required, perform the simpler rebalance cycle at any time after a successful pre-balance of a wheel. Performing a new initial run is unnecessary.

Balancing	Process	
BAL1 (1)		<u>8</u>
RPM		
<b></b>	<b></b> هـل ب 120	IM == 20.00
Process: Slot 3: sensor open		SYNAMIC BALANCE SYSTEM
M1+ M1- M2-	M2 - Activate manual RPM	Cancel

#### Activate manual RPM

In configurations with automatic balancing, move the balance weights manually using M1+, M1-, M2+, and M2-.

When no RPM signal is present, click **Activate manual RPM** to set the RPM filter to the setting determined by the manual RPM parameter.

Figure 28

#### **Neutral Position**

Click **Neutral Position** to move the weights in the balancer to neutral (opposite) positions. This function operates only with non-contact type balancers that are configured with optional zero weight position sensors.

#### Back

Click Back to exit the Balancing Parameters menu and to return to the overview of all balance cards.

ł	Balancing Proce	ess 🗎	
	Slot 1: Non	contact, dual (5532D)	
	Revision Hardware revision / software version	1.03 / 0.26	
abc	Name Name of the card or application.	BAL1	
	C	NC Interface	
	Balance Limit Enter your desired auto balance target value.	<b>0.500</b> μm	
9	Balance tolerance Rebalance is needed above this level.	<b>13.000</b> µm	
0	Critical level Critical level to indicate problem.	33.000 µm	
Œ	Upper Critical RPM Set optional upper RPM error level (0=off).	3000 rpm	
e	Lower Critical RPM Set optional lower RPM error level (0=off).	60 rpm	
0/1	CNC Bot Mode Set operation of Bot / Bot2 during auto balance	active	
		Balancing	
E	BAL1 BAL2	5	
E	Balancing: Slot 2: Low Coolant Flow detected (M)	DYNAMIC BAL	ANCE SYSTEM
/	Next Card		<u>.</u>

#### **Balancing Parameters Overview**

In the **Balancing Settings** menu, all the parameters for each existing balance card appear by topic. The tabs below the parameter list show the card names. Click a tab to select that balance card. Click **Next Card** to move from one card to the next.

To move from one parameter to the next, click the **Up** and **Down** arrows or select the parameter option.

After making a change, the system save all parameters immediately.

Figure 29

For more information about balancing functions and parameters, see the user's guide for the SB5500 control from <u>https://accretechsbs.com/</u>.



Figure 30

#### **Balancer Mini View**

Balancer Mini View appears when the SB-5500 control does not have process cards installed. Each balancer card appears in order by slot number and is indicated by a bar graph that shows the current balance condition. The bar graphs scales to fit all installed balance cards to the assigned mini view area.

If a process control card is installed, then this view does not appear. Instead, configure the balance bar graphs to appear as part of the selected **Process** view.

# **ExactControl and Studer AE Control Process Views**

See the **ExactControl** manual for details on using the ExactControl card and its views. See the **Studer AE Control** manual for details on using the Studer AE Control card and its views. These cards also have interfaces through the Profibus/Profinet interface if it is installed.



### **ExactControl Process Overview**

Figure 31

- ① **Process View** tab
- ② Process Parameters tab
- Idling Time: Shows the measurement signal for one second before the start. The pink region is the idling time used for acquiring the average signal level in the relative measurement method.
- **2** Y Axis: Amplitude of the measurement signal in percentage (%) of the full input range.
- Start Time: Processing starts at the CNC/PLC Start signal, the Profibus Start signal, or the IVIS Start Job button.
- X Axis: Process timeline from cycle start and continuing to cycle stop—for several hours, if appropriate.
- Connection Indicator: The connection indicator circle shows connection status between IVIS and the SB-5500. A green circle indicates a successful connection. A yellow circle indicates that IVIS is attempting a connection. A red circle indicates a failed connection attempt. Scrolling SB-5500 error messages appear to the right of the status indicator.
- Channel Label: The active label indicates which channel is displayed. For Digital and Profibus channels the start number appears in <angle brackets>.
- **Job** that was selected and started.
- Symbol Instance: Shows the surveillance strategy and the result of monitoring (here: 9.7% error). Add up to a four job instances.
- Select Process View: Job, Instance, Channel, or AEMS.
- **•** Menu Bar with function buttons.



Important The Process windows show the results of the most recently run process. The windows are blank when IVIS or SB-5500 starts, since no process results are available.

The graphics area displays the measurement data and scales the data automatically, so that the entire measurement signal appears in the window. The figure at left displays the beginning of data recording at zero seconds, while the **Start** process is active. The monitoring and recording ends with the **Stop** process.

Figure 32

#### **Process Data Display**

The IVIS display automatically adapts to the hardware and parameters configuration.

On Process windows, press the keyboard arrows to change how the signal is appears in the window for the current job. To change the gain or scaling of the displayed data for either the Y or X axis, press the arrow keys separately. To change the signal offset or view window of the screen, press the arrow keys and **Shift** simultaneously.

When the display is changed using the arrow keys, the system turns off automatic scaling for the current job. When another job is selected, IVIS is restarted, or the spacebar is pressed, automatic display scaling reactivates.

#### **ExactControl Instance Monitoring Results**

The icons for each instance in the Job view indicate important status information for the process. The system continually updates the information. The monitoring gives the operator a quick overview of the current result.



#### **ExactControl Process View Selection**

To switch between process views, click the **Previous** and **Next**  $\bigcirc$  arrows at the bottom right of the window above the menu bar.

IVIS in conjunction with an ExactControl card offers the following possible views of the process.



Figure 34

#### Job view

The **Job** view displays all instances associated with a job as icons on the right side of the window. Displays the details of the selected instance in full-screen mode.

An instance is a specific monitoring strategy (along with the required parameters for evaluation) that is applied to an assigned input signal. The job (all associated instances) is evaluated during a defined process time: between the **Start** and **Stop** processes.

The channel is the digital, Profibus, or manual channel that is used to initiate the **Start** and **Stop** processes.



#### Figure 35



#### Instance view

The **Instance** view is divided to show full displays of all instances (for a maximum of four instances) associated with the active job.

#### **Channel view**

The **Channel** view is divided to show full displays of all instances run by multiple jobs initiated by two separate channels. The top half of the window displays one channel and bottom half of the window displays the second channel.

For more information about instances, jobs, and channels, see the ExactControl user's guide.

Figure 36



Figure 37

#### **Overlay view**

The **Overlay** view allows comparison of different signal sources in one plot, which helps with signal evaluation and diagnosis (for example, testing two AE sensors at different positions). This window shows one view with an overlay of all signals for all instances within the current job. It only displays the process signals without any process evaluation result indications. The presented signals are color coded as follows:

- Instance 1: blue
- Instance 2: purple
- Instance 3: red
- Instance 4: black



#### AEMS view

The **AEMS** view is available only when an AEMS card is installed. It uses a different set of buttons for operating the AEMS card. For more information, see the "AEMS View" main section.

Figure 38

#### Start Job

From the **Process Parameters** menu, click **Start Job** to start the selected job by the manual channel. Use this for the setup and evaluation of jobs and for recording process data for offline evaluation.

The manual channel produces PCT data files named **M\*.PCT**. For more information about PCT file locations and names, see the ExactControl user's guide.

When the IVIS program ends, data recording does not stop. If the job continues to run, data can continue to be stored on the local SD memory of the ExactControl card. Data can be recorded over long periods of time, even weeks or months. To stop recording, click **Stop** or turn off the power to SB-5500.

#### Start Teach Job

Click **Start Teach Job** to start a Teach process by the manual channel for all instances associated with the current job that require Teach process data. When the job or instance numbers flash light blue, this indicates that a teaching is in process.

#### **Stop Teach Job**

Click Stop Teach Job to stop the Teach process and to save resulting Teach data.

#### Channel

Click **Channel** to open the channel selection menu, and then select a channel to view. Only channels that have data from a current process can be selected; other channel buttons are unavailable. If no channel has current process data, then this button is unavailable.

#### File

Click **File** to open the File menu and to access and display saved PCT files with recorded process data. Files accessible are for the connected device. When connected to SB-5500, files stored on the ExactControl card are available as well as files stored on the local PC. Files can be copied from SB-5500 to the PC.

From the General Settings Connection window, select **Offline mode** to access files stored on the local PC when not connected to any device. For more information about the File functions, see the ExactControl user's guide.



#### **Next Instance**

On the **Job** view, click **Next Instance** to switch the display focus to the next instance associated with the current job. The process results for that instance appear in full-screen mode.

Figure 39

# **ExactControl Process Parameters Overview**

Assign a number of independent jobs (sets of monitoring instances). Run a job (start or stop) by the manual channel (**Start** and **Stop** on the menu bar) with a digital signal or a Profibus signal.

The tabs at the bottom of the parameter list show the user-assigned names of the installed cards. (The default names are SLOT1, SLOT2, etc.) Click a tab to select a card or click **Next Card** key to move from one card to the next.

vis IVIS	E		- 0 <b>- X</b> -			
	ocess E					
	Job 1 (DRS, GAP)					
Job (116) Current job	• 1	•				
abc Name Job name or application	job 1					
	Instance 1					
Measurement signal Select the signal input here	Analog Input 1	>>				
Strategy Used Strategy	ExactDress	>>				
0/1 Switching output Switching output of the strategy	off					
	Instance 2					
Measurement signal Select the signal input here	Analog Input 2	>>				
Strategy Used Strategy	ExactGap	>>				
0/1 Switching output Switching output of the strategy	off					
EXCTL AEMS1						
Process: Slot 3: sensor open	· ·					
Add Instance	Remove copy job past	e job AE setup	Back			

Figure 40

#### Edit Job: Job and Instance

- 1. Select a job to edit. For ease of reference, each job may be named.
- 2. Add, remove, or edit existing instances associated with the selected job.
- 3. After editing the parameters for an existing job, the word *Modified* appears in red in the upper right corner to indicate that parameters on the window have been changed will be saved when the menu is exited.
- 4. Click **Undo** to return all modified settings to the saved settings. Use **Undo** to prevent making changes to jobs in error.

# Add Instance

Click **Add Instance** to add a new instance job (up to four instances maximum). Set or edit parameters to configure the instance.

## **Remove Instance**

Position the cursor on the instance and click Remove Instance to delete it.

### Copy Job

Click **Copy Job** to copy all settings of a job and then paste it into another job number. Use this function to save time and to ensures error-free transmission of the parameter settings.

Use the clipboard in the operating system to copy and paste a job between two IVIS program instances and device boundaries.

For a more information about ExactControl operation and settings, see the hardware user's guide for the ExactControl card from <u>https://accretechsbs.com/</u>.

# **AEMS View**

The AEMS card also has and interface through the Profibus/Profinet interface if it is installed.

# **AEMS Process Overview**

In cases where the AEMS card is the only installed process card in SB-5500, the AEMS view is the only Process view. In cases where both AEMS and ExactControl cards are installed, the AEMS view is available as one of the process views (in addition to Job view, Instance view, and Channel view).





- ① **Process View** tab
- ② AEMS Parameters tab
- Y Axis: Signal level of the measurement signal.
- Name assigned to AEMS card and slot number (x) in the SB-5500 control.
   Second line indicates the current Job (1-16) or the set mode (M1/M2).
- Four Limits Green: gap (contact)

Blue: limit 1 and limit 2

Red: crash (safety limit).

- Measuring signal of the acoustic sensor.
- X Axis: Time in seconds. Real-time scrolling display of the acoustic signal level with adjustable time scale.
- **6** Menu Bar with function buttons.

#### Stop and Start

Click Stop and Start to stop and start the real-time display of the signal level in the graphics area.

#### M2 and M1

Click M1 or M2 to switch to that parameter set (M1 or M2).

#### Job + and Job -

Click Job + to go to the next job or click Job - to go to the previous job.

#### Limits

Click Limits to open the Limits menu and adjust the limits for gap, limit 1, limit 2, and crash.

as IVIS			- 0 ×				
_	Balancing	Process					
Slot 3: AEMS (5522)							
1698	Revision Hardware revision / software version	3.00 / 0.20	]				
abc	Name Name of the card or application.	AEMS					
		CNC Interface					
Ŏ	CNC open time Select minimum CNC open time (1ms - 250ms).	1 ms					
Q	CNC close time Select minimum CNC close time (1ms - 250ms).	1 ms					
0/1	CNC Crash Latch Enable or disable CNC Crash Latch.	off					
~	Start/Stop Control Source MENU + HOST + CNC or MENU + HOST	menu + host					
		AE Parameter					
Í	Job Current job	2					
	Mode Current mode (M1/M2)	M1					
S	Measurement time	0 s					
E	XCTL AEMS						
-	∧ ✓ □	AE setup	Process 0				

Figure 42

#### AE Setup

To set system gains for the acoustic signal, use a learning cycle. The system separately records **Air** (no contact) signal level and the **Work** signal generated by normal grinding or the dressing process. It compares the signal levels for Air and Work across all frequency ranges. Then it proposes the frequency with the best signal ratio as the monitored frequency. A learn cycle helps select the best frequency range for monitoring for best process results. However, the proposed frequency may not be the best for a specific application. Red bars indicate results with insufficient quality to recommend (low ratio or insufficient measurement time).

For more information about AEMS Learn cycle, parameters, and operation, see the hardware user's guide for the AEMS card from <u>https://accretechsbs.com/</u>.

# **AEMS Parameters Overview**

For each AEMS card installed, AEMS Parameters lists the parameters by topic.

The tabs show the installed card names. Click a tab to select a card or click **Next Card** to move from one card to the next.

After editing parameters, the system saves the changes immediately.

NIS NIS	- 🗆 🗙	VIS IVIS			- 🗆 X
Balancing Process		Balancing	Pro	coss	
Learning: Air pass	#1	Select frequency range			#1
		Quality	Frequency	Work pass / Air pass	
		12.8	110 kHz	4.549 / 0.355	
		2.5	220 kHz	0.434 / 0.173	
		1.0	330 kHz	0.142 / 0.139 📲	
		1.0	440 kHz	0.117 / 0.117 🚦	
		1.0	550 kHz	0.103 / 0.102	
		1.0	660 kHz	0.089 / 0.088	
		1.0	770 kHz	0.074 / 0.076	
		1.0	880 kHz	0.011 / 0.011	
	70 kUz 990 kUz	Current:	220 64 4	0.270/0.166	
Slot 3 AFMS		Slot 3 AEMS	220 1112	0.27970.100	
Next Cancel	Process	<b>^ ∨</b>	Save	Cancel	Process

Figure 43

# Maintenance and Support

# Software Update

- 1. Before updating IVIS, create a backup copy of the existing IVIS directory, so that the software can be rolled back to the previous version at any time.
- 2. Before updating IVIS that is integrated with Sinumerik Operate, do the following:
  - a. Go to the **oemframe.ini** file.
  - b. Under <hmisl>/compat/user, delete the following section:

```
[IVIS]
hOEMFrameWnd=A01AC
hOEMFrameTask=0D10
hOEMAppWnd=50188
hOEMAppTask=0
hOEMAppWndRelatedOEMAppTask=0D00
hOEMAppThread=0001
```

This ensures that Sinumerik Operate can launch and display the new IVIS program version correctly.

3. To update the IVIS software, copy a new version of the IVIS program into the existing IVIS directory on the PC and replace the existing files.

```
Note IVIS saves all IVIS configuration settings in the config.xml in the IVIS\config directory. The config.xml file and the log file are not included in the new version of IVIS, so the system does not replace those files. The system stores all device settings (Balance and Process parameters) on the device, so device settings are not affected by an IVIS update.
```

# Software Uninstall

The IVIS program is not installed in Windows; it is copied to a directory on the PC and is started from there. Therefore, the program does not appear in the list of installed programs in Windows.

To remove IVIS, delete the IVIS directory from the PC. A typical Windows uninstall is unnecessary, because the log files are stored only in the IVIS directory.

# SB-5500 Firmware Update with IVIS

IVIS displays the steps for updating the SB-5500 control firmware using its USB interface. The following messages appear in IVIS during firmware updates.



Figure 44

INS INS	- • •
Balancing Process	
Firmware update:	
Searching flash drive for updates	
Start Start Teach Channel Next Instance Balance Balance	

Figure 45

- 1. IVIS recognizes a USB flash drive.
  - a. Download firmware update zip file from the SBS website at: https://accretechsbs.com/
  - b. Unzip the device firmware files onto the root of a USB flash drive.
  - c. Insert the USB flash drive in the SB-5500.
  - d. When the **Firmware update available** message appears, click **Yes** to start the update.
- 2. IVIS begins the firmware update.
  - a. IVIS searches the USB flash drive for the latest version.
  - b. IVIS copies the files to the system automatically.

INS INS		
Balancing	Process	
	Firmerican constants :	
	Firmware update:	
	Please remove flash drive.	
		OTNAMIC BALANCE STETEM
	Y Y	
Start Start Teach Channel Job 1 Job 1	Next Instance	Balancing





Figure 47

- 3. Remove the USB flash drive.
  - a. When IVIS finishes copying the files, it displays a **Please remove flash drive** message.
  - b. For the upgrade to proceed, remove the flash drive.

- 4. IVIS updates the firmware.
  - a. During the update, the system disconnects IVIS.
  - b. The SBS-5500 controller runs the update automatically. This process may take a while, up to two minutes if the control has a display.
  - c. After the update, the system reconnects to IVIS.
  - d. When the status indicator circle turns green, the updated system is ready for use.

# Log File

The IVIS programs logs its operation status to an HTML file. If an issue occurs, send this file to the IVIS support staff. For more information, see the <u>Info</u> window.

## Support

For support, contact the machine builder or SBS at:

Accretech SBS, Inc. 2451 NW 28th Avenue Portland, Oregon 97210 USA

Tel.: +1 503.227.7908 Fax: +1 503.223.1258 <u>TechSupport@accretechSBS.com</u> <u>https://accretechsbs.com/</u>

# **Return and Repair Policy**

Accretech SBS, Inc. policy is to give highest priority to the service needs of our customers. We recognize the cost of machine downtime, and we strive to deliver same day repair of items arriving by overnight delivery at our facility. Because of the complication and delays involved with international shipments, customers outside the continental U.S. should contact their local SBS Balance System source for service support. Before returning any equipment for repair, you must contact Accretech SBS, Inc. for a Return Materials Authorization (RMA) number. Without this tracking number, Accretech SBS, Inc. cannot ensure prompt and accurate completion of your repair needs. Failure to obtain an RMA number may result in substantial delay.